Attorney's Docket No.: 12732-064001 / US5158/5166 Applicant: Jun Koyama et al.

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

- 1-4. (Canceled)
- 5. (Currently Amended) A liquid crystal display device comprising pixels, each of said pixels comprising:
 - a source signal line;

wherein each of said pixels has n x m (n is a natural number equal to or greater than 2, m is a natural number) memory circuits; [[,]]

- n gate signal lines; [[,]]
- n TFTs having gate electrodes wherein the n TFTs are connected to the source signal <u>line;</u> [[,]] and
- a D/A converter for converting n bit digital signals stored in said n x m memory circuits into analog signals,

wherein said memory circuits store each of said pixels stores digital signals corresponding to m frames, in the n x m memory circuits, and

wherein each of said gate electrodes is connected to a corresponding one of said n gate signal lines.

- 6-7. (Canceled)
- 8. (Currently Amended) A liquid crystal display device comprising pixels, each of said pixels comprising:
 - a liquid crystal element; [[and]]

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a source signal line; [[,]]

n (n is a natural number equal to or greater than 2) gate signal lines; [[,]]

n TFTs having gate electrodes; [[,]]

n x m (m is a natural number) memory circuits; [[,]] and

a D/A converter,

wherein each of said gate electrodes is connected to a corresponding one of said n gate signal lines, and

wherein each of said n TFTs has a source region and a drain region, and one of which is connected to said source signal line and the other of which is connected to an input terminal of one of said n x m memory circuits,

wherein an output terminal of each of said n x m memory circuits is connected to an input terminal of said D/A converter, and

wherein an output terminal of said D/A converter is connected to said liquid crystal element.

9. (Canceled)

10. (Currently Amended) A liquid crystal display device according to claim 8, wherein:
wherein said liquid crystal display device has a source signal line driving circuit including shift registers, first latch circuits, second latch circuits, and switches,

wherein said first latch circuits hold n bit digital signals upon receiving sampling pulses from said shift registers until said n bit digital signals are transferred to said second latch circuits, and

wherein said switches select said n bit digital signals that have been transferred to said second latch circuits one bit at a time to input said selected signals into said source signal line.

11. (Original) A liquid crystal display device according to claim 8,

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wherein said liquid crystal display device has a source signal line driving circuit including shift registers, first latch circuits, and second latch circuits, and

wherein said first latch circuits hold 1 bit digital signals upon receiving sampling pulses from said shift registers until said 1 bit digital signals are transferred to said second latch circuits.

12-32. (Canceled)

33. (Currently Amended) A liquid crystal display device according to claim 5, wherein said memory circuits and said D/A converter are arranged so as to overlap [[a]] the source signal line.

34-46. (Canceled)

- 47. (Previously Presented) A liquid crystal display device according to claim 5, wherein said memory circuits are formed over one selected from the group consisting of a glass substrate, a plastic substrate, a stainless steel substrate, and a single crystal wafer.
- 48. (Previously Presented) A liquid crystal display device according to claim 8, wherein said memory circuits are formed over one selected from the group consisting of a glass substrate, a plastic substrate, a stainless steel substrate, and a single crystal wafer.

49-52. (Canceled)

53. (Previously Presented) A liquid crystal display device according to claim 5, wherein said liquid crystal display device is incorporated in one selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a head mount display, a television set, a portable electronic book, a personal computer, and a digital camera.

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54. (Previously Presented) A liquid crystal display device according to claim 8, wherein said liquid crystal display device is incorporated in one selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a head mount display, a television set, a portable electronic book, a personal computer, and a digital camera.

55-69. (Canceled)

70. (Currently Amended) A liquid crystal display device comprising pixels, <u>each of said</u> pixels <u>comprising</u>:

a source signal line;

wherein each of said pixels has a liquid crystal element; [[,]]

n x m (n is a natural number equal to or greater than 2, m is a natural number) memory circuits; [[,]]

n gate signal lines; [[,]]

n TFTs having gate electrodes wherein the n TFTs are connected to the source signal line; [[,]] and

a D/A converter for converting n bit digital signals stored in said n x m memory circuits into analog signals,

wherein memory circuits store each of said pixels stores digital signals corresponding to m frames, and

wherein each of said gate electrodes is connected to a corresponding one of said n gate signal lines.

71. (Currently Amended) A liquid crystal display device according to claim 70, wherein said memory circuits and said D/A converter are arranged so as to overlap [[a]] the source signal line.

72-73. (Canceled)

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74. (Previously Presented) A liquid crystal display device according to claim 70, wherein said memory circuits are formed over one selected from the group consisting of a glass substrate, a plastic substrate, a stainless steel substrate, and a single crystal wafer.

75. (Previously Presented) A liquid crystal display device according to claim 70, wherein said liquid crystal display device is incorporated in one selected from the group consisting of a mobile telephone, a video camera, a mobile computer, a head mount display, a television set, a portable electronic book, a personal computer, and a digital camera.

76-81. (Canceled)